

LEAD

On the Job

A Guide for Employers

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How Are Workers Exposed to Lead?

Workers can be exposed to lead by creating dust or fumes during everyday work activities. Fumes are easier to breathe in and therefore may be more dangerous than dust. These are some of the most common ways to be exposed.

LEAD DUST is produced in many ways including:

- ◆ Grinding, cutting, drilling, sanding, scraping or blasting surfaces that are coated with lead paints
- ◆ Tearing down structures that have been painted with lead based paints
- ◆ Cutting through leaded cables or wire
- ◆ Pouring powders containing lead pigments

LEAD FUMES are also created in many ways including:

- ◆ Using heat guns to remove paint from doors, windows, and other painted surfaces
- ◆ Welding or soldering lead containing materials
- ◆ Torch cutting painted and uncoated metal

What are the Health Effects from Lead?

Lead can enter the body in two ways:

- ◆ It can be inhaled (breathed in)
- ◆ It can be ingested (swallowed) by getting it on the hands, clothes, or hair, or in food, drinks or cigarettes

Once lead gets into the body, it can stay there for a long time. It is stored in three places: the blood, body organs, and bones. Lead stays in the blood about a month, in body organs for several months, but can remain in the bones for years. It affects the brain and nervous system, reproductive capabilities, the kidneys, the digestive system, and the body's ability to make blood.



Early signs of lead poisoning:

- ◆ Tiredness
- ◆ Headache
- ◆ Metallic taste
- ◆ Poor appetite

Later signs are:

- ◆ Aches or pains in stomach
- ◆ Constipation
- ◆ Muscle and joint pains
- ◆ Memory problems

These symptoms may be confused with every day aches and pains. It is important to remember that lead may be causing injury to the body even if these symptoms are not felt.

What is the Employer's Role?

Employers are responsible for maintaining a healthy and safe workplace, which includes knowing and following the Occupational Safety and Health Administration's (OSHA) General Industry Lead Standard (29CFR1910.1025) and Construction Standard (29CFR1926.62). You are also responsible for developing and implementing a comprehensive lead exposure prevention plan.

Blood Lead Testing

Blood lead levels can rise quickly. With frequent monitoring of blood lead levels, dangerous exposures can be quickly identified and corrected, workers can be protected, and the need for OSHA-mandated medical removal of workers can be avoided. A blood lead level over 25 µg/dL shows that substantial exposure to lead is occurring. There is also increasing evidence that health effects may occur at this blood lead level.

Based on this information, the New York State Department of Health encourages employers to consider more frequent testing than required by OSHA, and the tracking of blood lead levels over time to identify trends. The following guidelines for testing were developed with the New York State Occupational Health Clinic Network. These occupational health clinics provide state of the art diagnostic and treatment services to New York State workers with occupationally related disease. The guidelines meet the OSHA standards and provide more information to the employer and employees to help control dangerous exposures.

Voluntary Guidelines for the Control of Lead in the Workplace*

- ◆ First, test each worker before they begin any work involving lead
- ◆ Then test that worker every month:
 - For the first 3 months of testing, and
 - Whenever the previous blood lead level was greater than 25 µg/dL (*If the previous blood lead level was at least 50 µg/dL, a follow-up test within 2 weeks and medical removal is required*), or
 - Whenever an increase of at least 10 µg/dL from the previous test is observed
- ◆ After the first three months, continue testing every 2 months:
 - When the blood lead levels have remained below 25 µg/dL for 3 months, and
 - If an increase less than 10 µg/dL from the previous test is observed
- ◆ Test every 6 months:
 - When the blood lead levels remain below 25 µg/dL for 6 months, and
 - If an increase less than 10 µg/dL from the previous test is observed

Results of each test should be provided to the worker. Graphing the test results can help the employer and the worker identify whether blood lead levels are dropping, remaining stable or increasing. The employer should also review the test results for all workers to help identify jobs where problems may be occurring.

**These guidelines exceed OSHA requirements for medical monitoring.*

How Can Lead Poisoning on the Job Be Prevented?

REDUCE the use of lead containing materials

- ◆ Substitute other materials whenever possible

CONTROL exposure through appropriate **local exhaust ventilation**

- ◆ Be aware of how these systems work, and make sure they are working correctly

USE good housekeeping practices

- ◆ Do **NOT** use compressed air to remove lead-based dust or paint
- ◆ Clean up dust and debris on a regular schedule. Do **NOT** dry sweep.
- ◆ Use a vacuum with a high efficiency filter (HEPA) and/or wet cleaning methods

PROVIDE employees with a **clean lunchroom** separate from the work area

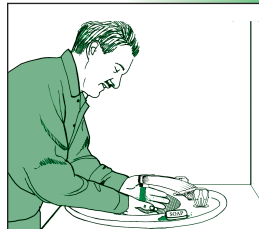
- ◆ Do **NOT** allow eating, drinking or smoking or storage of food, drinks, cigarettes or cosmetics in work areas
- ◆ Have employees **wash** hands and face before eating
- ◆ **Clean** the lunchroom thoroughly after each shift

PROVIDE employees with **respirators**

- ◆ Medical evaluations for employees should be provided
- ◆ Fit-testing must be conducted
- ◆ Provide employees with training about the proper use and maintenance of respirators

FURNISH employees with **protective clothing**

- ◆ Work clothing and shoes should **NOT** be worn home
- ◆ **Supply** gloves



HOLD regular **training** sessions, at least once a year. Inform workers of:

- ◆ The hazards of lead exposure
- ◆ Effective control measures such as engineering controls and safe work practices
- ◆ Correct methods of using respiratory protection and limitations of respirators
- ◆ Good personal hygiene
- ◆ Understanding the blood lead levels
- ◆ The dangers of bringing lead home from work to their families

Who Can Help?

New York State Department of Health.

Industrial hygienists with the New York State Department of Health can provide guidance in developing an effective safety and health program.

(800) 458-1158 extension 27900

New York State Department of Labor.

You can take advantage of the Occupational Safety and Health Administration's (OSHA) Consultation Service to identify and correct specific hazards and to provide guidance in developing an effective safety and health program. In New York State, these consultation services are provided by the New York State Department of Labor.

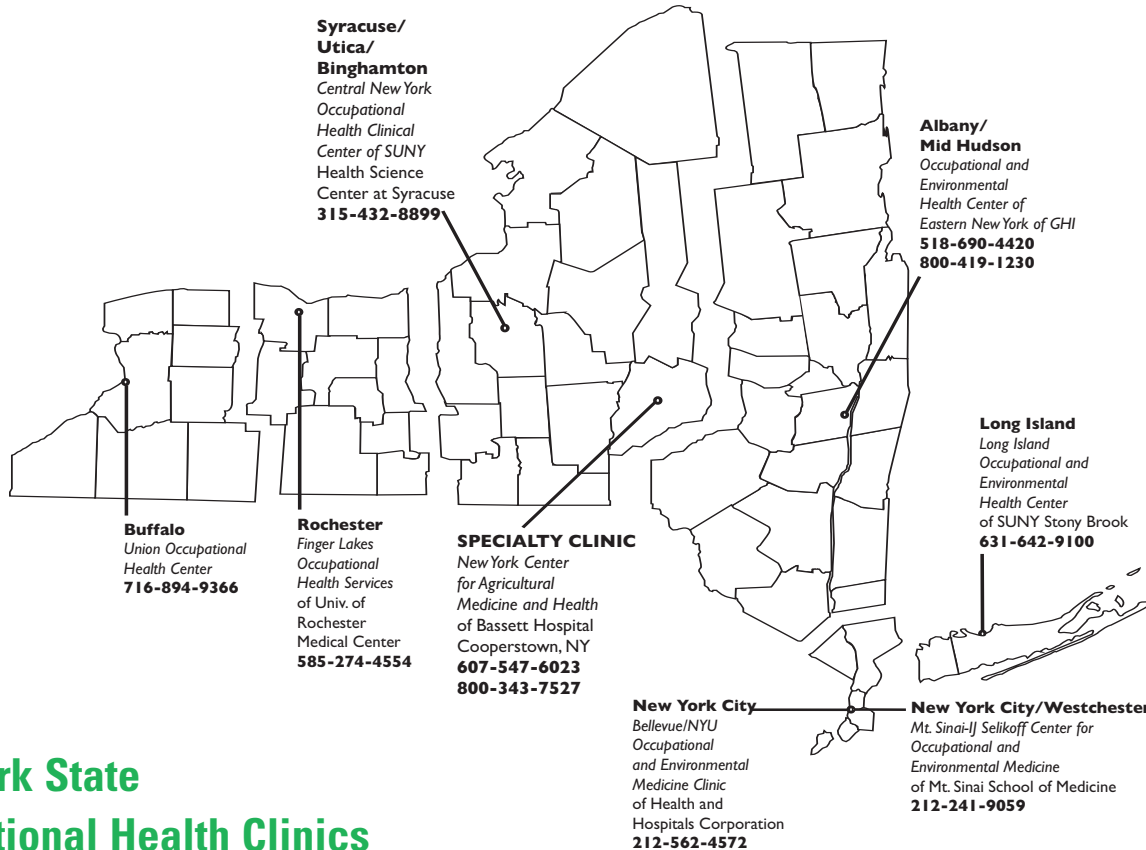
<i>Albany (518) 457-5508</i>	<i>New York City ..(212) 352-6099</i>
<i>Binghamton . . . (607) 721-8211</i>	<i>Rochester(716) 258-4570</i>
<i>Buffalo (716) 847-7133</i>	<i>Syracuse(315) 479-3212</i>
<i>Hempstead (516) 485-4408</i>	<i>White Plains.....(914) 997-9514</i>
<i>New York City . (212) 352-6099</i>	

Occupational Health Clinic Network

The New York State Network of Occupational Health Clinics provides diagnostic services, medical screening, treatment, referral and educational services for workers exposed to workplace hazards.

(See map on facing page.)

(www.health.state.ny.us/nysdon/environ/occupate.htm)



New York State Occupational Health Clinics



State of New York
George E. Pataki, Governor

Department of Health
Antonia C. Novello, M.D., M.P.H, Dr.P.H., Commissioner